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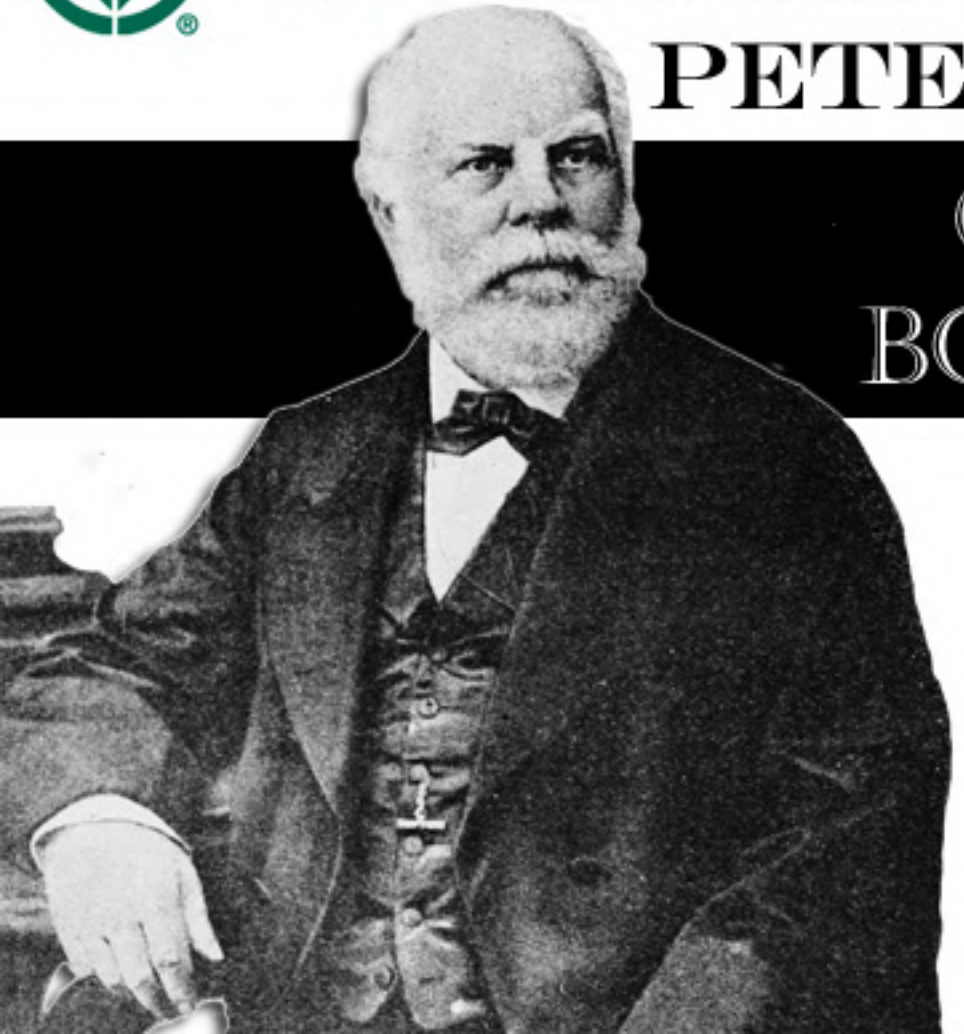
George Engelmann Botanical Notebooks



Pagination Note:
Since many of the items lack a specific page number, the page number displayed online refers to the sequentially created number each item was given upon cataloging the materials.

Wm M Gabb's Cactaceae of the Californian Peninsula 1867.

1.	Cardon espinosa	with fig. 3	Cereus Titan
2.	Cardon pelon		Cereus Calvus
3.	Pitahaya dulce	with fig. 1.	Cereus Thurberi
4	Chorea Cardon	[Cereus Emoryi fig]	
5	Pitahaya agre	with fig 2.	Cereus acutirostus ? diffusus ? flexuosus ?
6	Chirinole		Cereus Lemairei ? Gabbii ? Chirinole
7	Carambuya,	the common one,	Cereus Schottii Eng.
8	Carambuya,	arborescent form,	Cereus ~~diffusus~~ Gabbii ?
9	Pitahayita		Echinocereus Shavianus ? Arizonicus ?
10	Pitahayita		Echinocereus Wislizenii
11	Visnaga 1		Echinocactus Peninsularis
12	Visnaga 2		Echinocactus Emoryi var rectispinus
13	Pitahayita		Mamillaria Goodridgii
14	Pitahayita		Mamillaria Lenticularis
15	Pitahayita		Mam Scheeri
16	Pitahayita		Mam Grahamorum mamillaris
17	Pitahayita		Mam Longiflora
18	Pitahayita	(the most common)	Mam ~~Goodridgii~~, Schaer
19			Mam. Gabbii
20	Tuna tapona		Opuntia Tapona
	Tuna blanca		Opuntia
	Tuna mora		Opuntia
	Tuna		Opuntia × anthracantha
21	Chorea		Cylindropuntia prolifera Eng
22.	Clavellina		Cylindropuntia
23	~~Cirbe~~ Clavellina		Cylindropuntia Clavellina
24	Cirbe		Cylindropuntia
25	Atajera		Cylindropuntia Lemaire ?
26	Tasajo		Cylindropuntia

over

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3327

new spec 12 fold 6 without Opuntia

Wm Gabbs Cactaceae of the Californian Peninsula

17. Mamillaria longehamata Engelm n. sp.
15 M. setispina E. n sp
18 M Goodridgii Scheer
19 M Gabbii Engelm n. sp
11 Echinocactus peninsularis Engelm n. sp.
12 E Gabbii Engelm n. sp.
16 Cereus (Echinocereus) mamillatus Engelm n sp
14 C (Echi Engelmanni Parry
9 C. (Echi stramineus Eng ? Coulter ?
10 C. (Echi flavifloros Engelm n sp
4 C. (Cereus) Emoryi Engelm
6. C Eu Chrysocle Engelm n sp
5 C Eu flexuosus Engelm n sp.
3 C Eu Thurberi Engelm
1 C Eu Titan Engelm n sp
2 C Eu calvus Engelm n sp
7 C. Eu Schottii Engelm
8 C Eu Gabbii Engelm n sp
20 a Opuntia Platopuntia Japonica ? n sp
6 O. P.
& O. P. xanthostemma Engelm. sp.
13 O. Clavopuntia Emoryi Engelm ?
21 O. Cylindropuntia proliferum Eng.
22 O. Cyl
23 O Cyl Clavellina Engelm
24 O Cyl
26 O Cyl
25 O Cyl tesselata Eng ?

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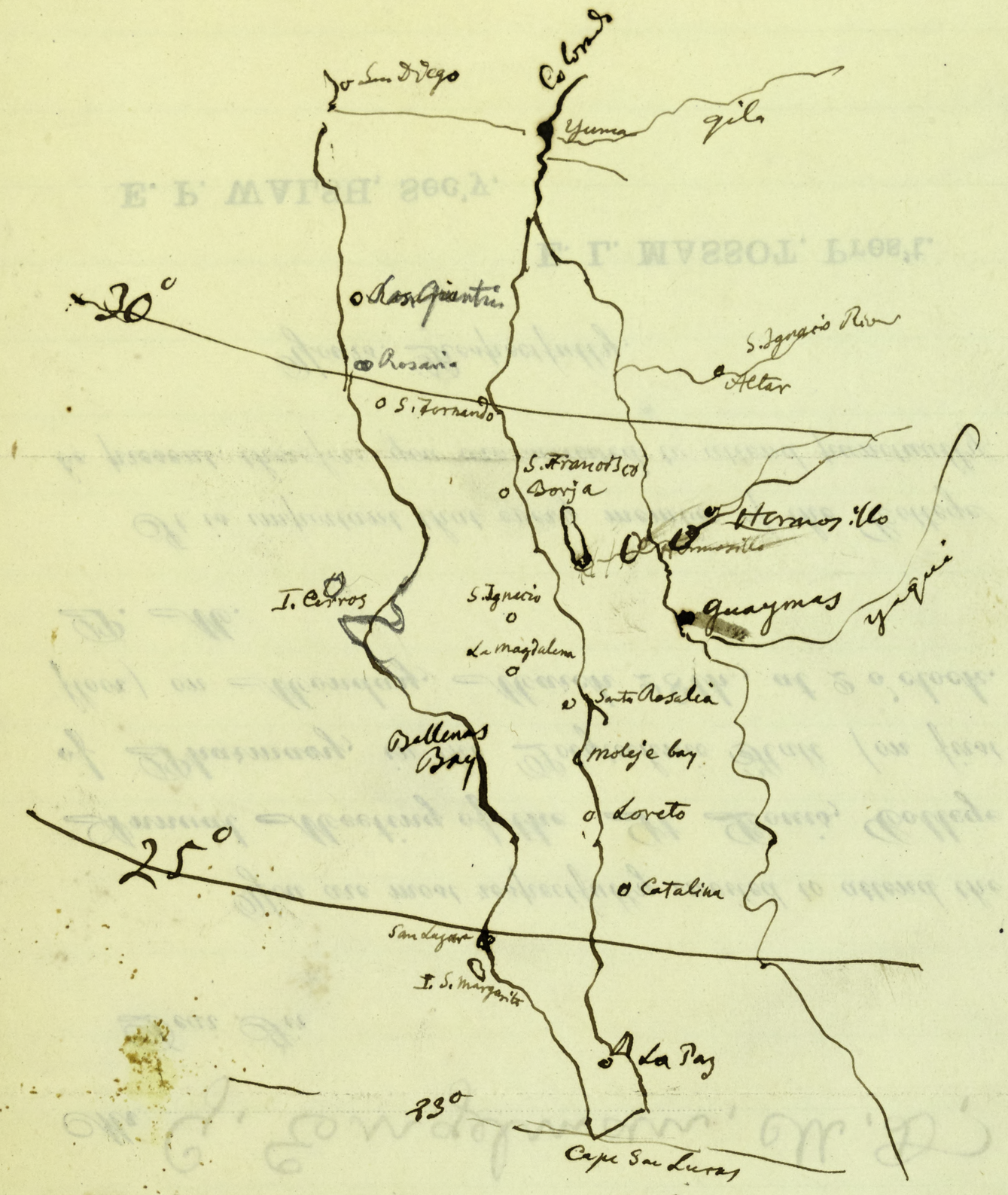
Peninsula of California 23° – 32½°



Wm M Gabb's localities:

- Cape San Lucas 23°
- Rosario 31°
- La Paz 24°
- Moleje 27°
- Loreto 26°
- Borja or San Borja 29°
- Comonda (lat 26°) 26°
- San Juan, north of Loreto
- San Ignacio 28°
- San Fernando 30°

Soledad (C. Chirig de
~~Baleses Bay~~ 27°
~~San Quentin~~ (C. Tiburon 30½°

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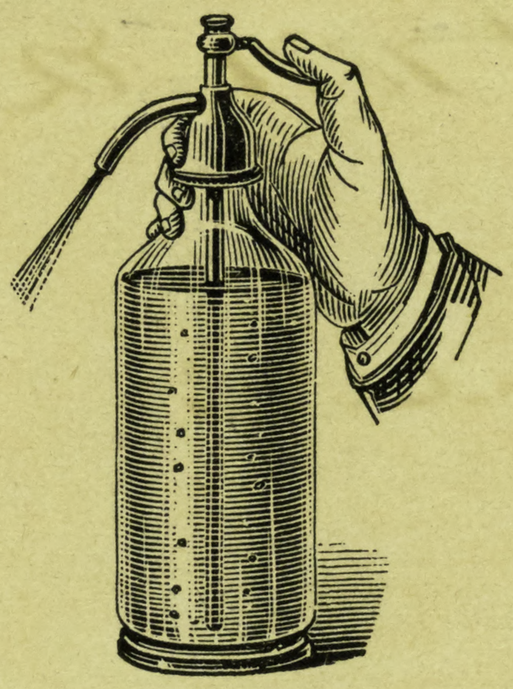
ENNO SANDER.

ADAM LINCK.



ENNO SANDER & CO.,

19 S. ELEVENTH STREET.

MINERAL SPRING WATERS

IN GLASS SIPHONS, JUGS AND BOTTLES.

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GIFT OF GEORGE ENGELMANN PAPERS

Concentrated Standard Solutions, and directions for making Mineral Waters, Chemical Analysis of Mineral Springs, Ores, Minerals, &c., &c.

St. Louis, Mo. Nov. 3. 1873

Lieber Herr Lauer,

Heute vormittag um 10 Uhr in meiner Office komme ich Ihnen den Geld überbringen; wenn es Ihnen nicht recht ist, will es Ihnen Bier abholen, oder wo es Ihnen sonst Geld gelegen ist Euler.

Ihr ergebener
Enno Sander.

Der Abkömmling ist in Zeitung gemacht.

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L. Agassiz Hassler Exped
1871–72

Gallapagos : Op. leptacantha n sp
Op. .....
Cer. storjosus ? multangulus ?

Montevideo Op. ovata ?
Op. plicosa
Cer.

San Diego Cer Emoryi Ley
Ech cylindrosus Ley.
Ech viridescens Brdt
Op. prolifera Ley
Op serpentina Ley.

Santa Barbara Ech spinosphaera 41° S. Catal.
Magdalena Bay O. pycnacantha n. sp.
Bay Man. Agassizii n sp

3330

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Cactaceae of the Expedition of
Lieut Ives 1857
collected by Dr J. S. Newberry

1. *Mammillaria Grahamii* Engelm in Mex. Bound Rep. II. p. 7. tab 6 fig 1–8. Synops Cact in Proceedings Am. Acad. Arts & Sciences vol III. p. 6. common along the Colorado. In flower April 7th; fruit of last year just ripe. — In the Mex B. Rep. the fruit is called (oval a small) berry, probably green, the specimens then at my command had shriveled up discolored fruit; those bought by Dr Newberry show that the fruit is an elongated clavate scarlet berry, 1/2 or even 1 inch long, with or without the remains of the flower. The seeds are absolutely the same of the Texan & El Paso plant.

2. *Mammillaria phellosperma*, Engelm. l.c. p. 6 tab 7 Synops Cact p. 6. common with the last, apparently more abundant eastward, while the former prevails farther eastward. Generally simple, sometimes many headed. — Some of the specimens absolutely resemble the figure in M.B.R.; others have fewer, (30–35) shorter and stiffer spines, almost in 3 series, the 8–12 interior ones quite short and purplish brown. One of the specimens before me has regularly 3 divergent hooked central spines.

3. *Echinocactus Whipplei*, Engelm & Bigelow in Pacif. R.R. Rep. vol IV. Cactaceae of Capt Whipple's Exped. p. 28 tab 1; Syn. C. p. 15. — In sandy soil on the Little Colorado, often half buried in sand — in the same region where Dr Bigelow first discovered it — 1853; in flower about the middle of May. — Dr Newberry's specimens have from 7–11 radial spines, etc see notes

4 *E. Lecontei*, Engelm in M.B.R. II. p. 23 tab 27 & P.R.R. l.c. p. 28. tab 2 fig 1–5. Syn Cact p 18. — In the Colorado valley, in flow. — April see notes.
Young Cactus — perhaps polyacanthus

5. *C. virides cens*, Nutt. in Torr & Gr. Fl. I. p. 554. Cayelan in M.B. Rep. II p. 24 tab 29. Syn Cact p 19. San Diego. see notes.

6. *Cereus Fendleri*, Engelm in Plank Fendl. in Mem. Am. Acad. 1848 p 51 M.B. Rep. II p. 33 tab 51–53. Syn Cact p 28 Cereus and from Laguna to Santa Fe. fl. April.

7. *C. phoeniceus*, Engelm. D.R.R. l.c. p. 34 tab 4 fig 1. Syn Cact. p. 28. ~~C. gracilis~~ Echinocereus coccineus, Engl. in Wislizen. Rep. note 9 ran Sabine see below

8. *C. phoeniceus* ~~subspec.~~ coccineus Engl & Brig. l.c. p. 35 tab IV. fig 4–5. Syn Cact. p. 28. Camp p. 96. May 15th So nearly allied to the last ~~species~~ that it was considered a subspecies of that plant. ~~He~~ Dr Newberry has now collected ~~the~~ and exhibits to subscribers ~~of~~ the flowers ~~the~~ the description ~~of which is subjoined.~~ His specimens has perfected the Siberia original ones, which in length ~~of~~ are 8 or 9 radial ones about 1, and 1 or 2 central ones, the longest one 2 inches long, and angular, all the spines are white, stiff and somewhat transparent, and resemble much the spines of some forms of C. enneacanthus, but the flowers are vastly different and belong to that ~~section~~ with permanently (i.e. day and night) open flowers, while in the species just name and its allies they are diurnal or open only a few hours during the day.

~~The species only collected~~

Flowers 3/2 – 4 inches in length, opening only about 1/2 – 2 inches; ovary small, with only 8 – 12 triangular scaly sepals bearing in the axills white wool and 3 – 5 slender whitish or light brown bristles, tube gradually widening, with about 20 scaly sepals bearing 3 – 5 ~~capsule~~ slender bristles in the axils similar but longer bristles, the upper scales ~~bear~~ long lanceolate, and their bristly longer and fewer (6–8'''

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as in all similar species. Upper sepals abt 8, oblong
oblanc; petals 8 oblanc, apparently abt 10–13;
stamens and styles nearly or quite as long as
petals; green stigmata 5. Ht flowers expanded 9.
" (C. phoenicus) This is Mammillaria aggregata"
of Engm's Report 1848. the "aggregate Cactus" or
Barbel cactus of the explorers of the western
parts of New Mexico & the Gila Regions. It
grows in large dense masses, heads 100–200
on a single base, of the shape of a
barbel basket, generally on apparently
naked rocks; and in the season densely
covered with its beautiful crimson flowers.
It was seen from Camp 64 to Camp 78; —
fr — April — May. — The fruit of the
the flowers collected by Dr Newberry are
not 2 inches long, much more densely covered
with Barbel bears, separate them the next species
and with only 5 stigmata. the naked part of the tube,
The fruit of this
crimson plant which has been known now since
1846 when Dr Wislizenus first discovered it
east of Santa Fe, remains as yet unknown.

Opuntia basilaris Engelm & Bigel P. R. p. 43
tab 13. fg 1–5 tab 23 fg 14. Syn. Cact p. 42
abundant from Fort Yuma to the Canon; generally
one of the most common species in the Colorado
Valley, and to San Felipe. Dr Newberry's notes
and sketches confirm the description given
before of the peculiar growth of this species
a large number of joints of different shape,
obovate, obcordate, cuneate, or elongated —
almost oblanceolate, issue from nearly the
same base, and are covered with a profusion
of rose colored or purple flowers: abt 150
on one plant. The ovary is described as nearly

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tuberculate, but joints almost smooth. The fruit is dry when ripe, ends as in the typical Opuntia hystricina, Eng. & Big. l. c. p. 44. Cat. No. 15. Fl. 5-7 Cat. 23 p. 15. Syn. Cact. p. 43.

common from the Colorado to the Rio Grande fl. May. — The form collected by Dr. Newberry agrees entirely with specimens ~~brought home~~ sent from Santa Fe many years ago by Mr. Fendler. The flowers were distributed among the Plants in Cambridge ~~by mistake~~ mixed with Op. phaeacantha, but may easily be distinguished by the spiny ovary.

named by him "having spiked Opuntias" has fewer (usually stouter shorter) spines than the forms figured and described in Bot. Mex. Whipple Report; the upper but the larger ones are also more erect, and by these characters distinguished from the nearly allied Op. Missouriensis. However Mr. Fendler's specimens from Santa Fe (the flowers of which were inadvertently distributed with those of Op. phaeacantha under No. 276 but are easily distinguished from them by their spreading ovaries) seem to unite this with Op. Missouriensis. —

The larger specimens of Dr. Newberry's have 1-1½ inches long, about 5-6 number, the smaller depressed ones, with a few small upper ones, ~~about 3~~ flowers nearly 2 inches diameter; ovary with 20-25 tolerably regular areoles, each with a short slender leaf (sepal) less than ½ inch long and 5-12 bristly spines of different lengths; the sepals obovate cuspidate, pale, brownish; outside orange yellow inside paler; 5 erect green stigmata forming a compact head. —

Op. Echinocarpa see among Opuntias

Op. arborescens

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Jan 1861

Cactaceæ of Gt Simpsons Expd.

coll. by H Engelmann

~~The Area of this~~

The geographical limits of the area of this
Excursion Among Jan'y have been
comparatively enlarged by this expedition, &
~~and 4 New~~ 7 New species known before, have been
found in new localities and 4 new species
have been discovered, 2 of which at least,
are Echinocacti and an Opuntia, are very different
from any thus of the same genus hitherto
found in the limits of the U. States,

6

& probably that a number of species exist
between the 38° & 40° parallel in the
Utah Basin, 2 Ech & 1 Cer & Op.

Mam. vivipara Haw
Ech. Simpsoni n. sp. Butte Valley & Robe Valley Utah
Ech. pubispinus n. sp. Pleasant Valley, Salt Lake desert.
Ech Whipplei Desert Valley near Camp Floyd
Cereus Engelmanni Bay Salt Lake Desert
Cer viridiflorus Eng. Fort Laramie
Opuntia Rhaphorapa Eng & B. var? Utahensis
Pass west of Reptor valley
O. curtispina Eng & B. ? Forks of the Platte
O. Fragilis var Eng & B. betw. Walker & Carson R.
O. Missouriensis ~~is~~ ~~var~~ var Allbispina
Lookout Mountain, west Utah
O. Fragilis Haw. Fort Kearny to the Rocky Mountains
O. pulchella n. sp. Walker River, Sandy desert

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Palmer Castaneo

Arizona & Sonora 1869

136 Cereus mojavensis E & B

134 C. Gonacanthus E & B.

both perhaps belong together

and too near this & the Not

135. 137. C. Fendleri Eng

C. Palmeri E. fr. & seed

C. Potosinus Aboriginum - E. fr & seed.

132. 133. Opuntia engelmanni E & B.

131 O. — fl. flav.

(bona here?)

O. acanthocarpa

Echinocactus Le Conteii

E. Emoryi straight spined.

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Examination of old rain gage

Jan 24 1870

Opening of funnel 6 inches French, square = 162,4 mm
verified by actual measurement

Inner diameter of rain gage measure, in lower
part, or average 90 mm.

Therefore: circumference
section of this measure 90 × 3.14
= 282.6
or surface

and section $\frac{282.6 \times \frac{90}{2}}{2}$ = 6358 □ mm

Open of funnel = square. 162.4 × 162.4
= 26373 □ mm

Therefore:
Section

Square surface of funnel: sect. of Measure
= 26373 : 6358 = 4,14 : 1

Therefore 4.14 inches in rain measure
ought to represent 1 inch in
rain gage,

1 inch english = 25.4 mm rain gage

Therefore 4.14 × 25.4 = 105 of measure
ought to indicate one inch of rain engl

and that is the actual scale of my
receiver

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3333

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most of the seeds in the hands of Hogg — New York
have come up.

LeConte's Cotte, Ga.
Dec 27 1852

1851 & 52

Le Contes seeds: 1, "E. Wilkesii" the above mentioned species has come up

2, " Ignot" seed similar to E. flexuosus has come up.

3. " Opuntia vaginata" no doubt seed of Mam fetrasistata has come up but died again

4. " Cereus gigantens" no! is probably a red-fruited Mamillaria with small pitted black seed. not up

5. " Echinocactus resembles Mamillaria" probably a small globose Cereus; not up

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Echinocactus LeContei (Wilkesii with seeds of cylindraceus E. cylindraceus.

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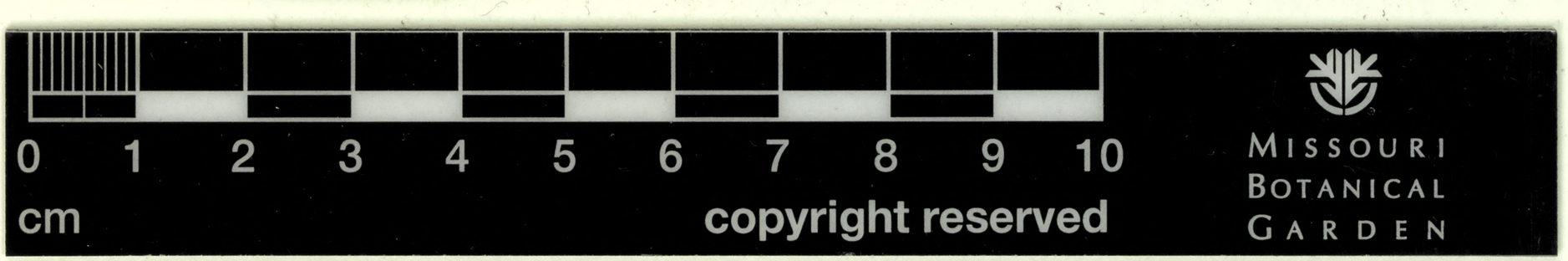

Gregg Cactem

668. Saltillo Aug. 1848 Viznaga Ech. lati costatus Large flattened; short stiff thorns, dangerous; as the top of head (size of large turnip) hardly rises above ground fl. purple

669. Peros Bravos near Saltillo Sept 1848 One joint on another sometimes to the length of several feet. Thorns stick in the legs of animals and joint break off and adhere to the animal — not seen in flower

670 Below Mesillas Sept 1848 Round Viznaga, head half buried in the ground; 1/2 foot high

671 Between Saltillo & San Louis Potosi Oct 1848 grows in bunches with long white thorns

672 North of San Louis Oct 1848 Broad fishhook Viznaga —

673 Hill at guadalupe near Mexico March 1849 short jointed Cactus resembling 669

674. do do white thorns but not so long, white or thick as those of 671. (same near San Louis and no 673)

1064 Valley of Rio Grande east of Santa Fe June 15th four square stems, Cactus (10+) flowers red.

1165 West of Presidio, June 7th near Mazatlan Broadleaf Cactus; flower yellow

1173. Hill near Mazatlan June 11th Stem Cactus 4. 5. and 6 sided, but mostly 5 sided: fl. pale red (10+) see 1064

1180 Low land near Sea boarder Mazatlan June 12 — Vine like Stem Cactus fl. whitish & fruit. — Creeping on stems of trees, rootlets not penetrating the bark.

1233 Hills near Mazatlan June 22d Dry flower and unripe fruit from 3 sided stem — Cactus — fl. whitish. — Considered the same species to all appearance I have seen growing attached to trees often at great elevation (10–15+)

1239 Mazatlan June 22d "Organo" The smaller specimens appear a little different, yet is it only difference of age — also with fruit — not eaten though a very similar looking fruit from a similar Organo is eaten — somewhat branching (10–30+)

1240 do do Woolly Organo — have seen neither fruit nor flowers. Also specimens from near Agua Caliente

1243 Hill near Mazatlan Small oval head Cactus (10+) in clusters

1244 " " " Common Broadleaf Cactus see No 1165

3335

Manillaria

1249. Hills near Tivistiran west of Morelia May 8 – small Viznaga, on rocks, with roots sometimes in crevices – but more frequently only spread among fine short green moss, on the smooth surface of the rock. (¼ +o)

1250 Barranoas May 25 Cactus family.

1251 Near Santiago June 2d Stem Cactus, stem 10 feet high + – joints seldom over 2 inches wide

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Chs. A Geyer = Hooker Journal of Botany
mentions the Mamillaria of the upper
Platte and the neighborhood of Fort
Laramie 1849?

Vol V. p. 29 : The stony tablelands of the interior
Oregon are the habitat of a Mamillaria
one of the largest of the Cenothele " solitary
" (single?) with yellowish white spikes, and very
small lurid reddish flowers

One from the Platte Plains has is small, flat-
shaped with very dense closely radiating spines
and small rosecoloured ~~spines~~ flowers.

A third Mamillaria is found on the
Oregon Plains of which seedlings have been
raised at Kew.

A Meloncactus was gathered at Fort Colville
at the "Priests" rapids" on a rocky island in
the Columbia River 60 miles above Fort
Walla wallah.

Opuntia Missouriensis on the upper most
waters of the Colorado

Cactus phyllanthus = Cereus scolopendrii folio D'Lapeyr
tubo 7 ft. 8–10 inches long, ft. 1½ inch diam.
fr. oval (not about) 2 inch long, 1 thick
= Phyllocactus Phyllanthus Link.
Echinocactus pectiniferus figured ~~in~~ Bot. Mag
Spec — from San Louis Potosi 20 ribs
about 20 spines with 5–6 short
central ones
Echinocactus Chloroplthalmus, certainly
an Echinocereus; purple very acer
Cereus anthus — fig in Bot. Mag.
10 ribs 10–12 spines nearly 1 inch long
from Real del Monte

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Sept 1961

Cactaceae Venezuelanae Fendlerianae

466 Cereus (Peloreus?)
columnaris multicostatus, areolis approximatis, aculeis
vi alienis, ovario subnudo (?)

461 Cereus
columnaris 6-angulatus, grandiflorus, ovario inermi
pauci-squamato

462 Cereus
columnaris plurangulatus, parviflorus ovario plurisquamato
areolis pulvinato tomentosis demum armatis

462 β. Cereus
areolis magis approximatis ramosis pulvinato tomentosis

467 Cereus
columnaris pauricostatus, ovario inermi squamis
paucis instructo

463. 6. Cereus
columnaris 4-angulatus, ovario inermi pauci squamato

463. Cereus
debilis 3 angulatus ovario squamato, pulvinato-
tomentoso pane aculeato

460. Cereus
457 exteris similis
cule nidi-ante 3 jugo, flavo grandi; ovario
fructuque spinulosissimo

458 Cereus
alato-triangulatus spinulosus, scandens
radicans.

459 Cereus (Phyllocactus)
alatus crispato crenatus inermis

1128 Rhipsalis Cassytha Gaert.

464 Opuntia
Pes Corvi similima pauci-corona humilis

465 Opuntia
arborea ramosissima inermis (?)

67 Pereskia aculeata Plum

2326 Pereskia microsepala sp. nov. ? sessiliflora
fol. oborato-lanceolatis, aculeis paucis singulis
rectis, ; fl. sessilibus singulis s. binis et
ovario sepalis paucis placentiis arcuminatis stipulis
deciduis tomentosis inermi (Cuba)

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P. rotundifolia Dt. Rev. t. 20 hirsuta *H. sessiliflora*!

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Cactaceae of Arizona
Dr Coues & Palmer

Opuntia arenthorapa E & B in arroyo fruit 3/8 ampl 13 pubilli.
Opuntia tesselata Engl spines 2–3 inches long.
O. Whipplei E & B. in arroyo fruit; 30 pubilli: E/13 seed 2‴ Dia
marked D, Dec 4 1861
O. —— ?
O —— spharocarpa ? 45–50 pubilli on small spherical fruit
in 7/17 ampl; seed 1½‴ Diam, brides conniving
O. Bigelovii Engl
O. basilaris E & B.
O. fulgens Engelm inermis, with fruit
O —— longispina
O. arborescens Engl
O. erinacea Eng & Berg ?
O phaeacantha Eng ? B. Dec 3. 1864
O strigil Eng ? A. Mar 26 1864 } large fruit
O —— ? A var: a.
O —— ? J. May 3d 1865
O —— ? I May 3d 1865 } small fruit
O —— ? C Dec 4 1864
O —— ? E. May 14 1865 stat spines long spines

Mammillaria Grahami Eng
M Arizonica Eng G May 12 1865
14–17 rad. 3 dark stat ratae
M sam? 6–8 20–21 ext. & 3–5 cent. S/n. } all the same 1866
M. sam? Sokeeni ? Dark Coloring

Cereus phoeniceus Eng
C Fendleri (blue Cole)
C conoideus ?
C. F. May 2d in full bloom
May 2d
immense bunches
F. May 2d in flower yet
L. May 3 (not fouc? no flowers)

3338

New York and New England and northward. ~~At the recession of the water the~~

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